

WHAT IS CLAIMED IS:

1. An apparatus for recording an image, said apparatus comprising a two-dimensional array of color image sensors, each color image sensor providing a measurement of a light intensity in a selected spectral region, said two-dimensional array comprising a plurality of identical blocks of color sensors, said blocks being juxtaposed to form said array, each of said blocks having equal numbers of sensors for each of said spectral regions, the number of different spectral regions being at least three, said sensors in said blocks being arranged in a two-dimensional array having a plurality of rows and columns, wherein said sensors in said blocks are arranged such that any straight line passing through a first sensor passes through sensors of at least three different colors whose spectral responses are linearly independent.

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2. The apparatus of Claim 1 wherein said straight line passes through said sensors of at least three different colors within a disk, centered at the first sensor and having a radius not larger than five times the center to center spacing of said blocks of sensors in said two-dimensional array of sensors.

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3. The apparatus of Claim 1 wherein each of said sensors corresponding to one of said selected spectral regions in blocks not adjacent to an edge of said two-dimensional array is adjacent to a sensor corresponding to the same spectral region.

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4. The apparatus of Claim 1 wherein the number of different spectral regions is 3, said spectral regions being denoted by R, G, and B; and said sensors in said blocks are arranged in the following pattern or in an arrangement comprising cyclic permutations of the rows or columns of said pattern:

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R	G	B
B	R	G
G	B	R
B	R	G

30 5. The apparatus of Claim 1 wherein the number of different spectral regions is 4, said spectral regions being denoted by C, M, Y, and G; and said sensors in said blocks are arranged in the following pattern, or in cyclic permutations of the rows or columns of said pattern:

C	M	Y	G
G	C	M	Y
Y	G	C	M